Exhibit 4, Section III - Remaining Response Actions (RAs)

PRS #	PRS DESCRIPTION	SCOPE OF WORK	Estimated LL Waste Volume (ft3)	Related Documents
11	Thorium and Plutonium contaminated wastes (crushed drums)	PRS 11 - Drum Disposal Area (this PRS along with PRSs 8 through 12 was binned as requiring "No Further Action" in 1996 by the Core Team, based on existing information at the time) Reference: Feasibility Study/Proposed Plan (Oct. 1994); Record of Decision (June 1995) Thousands of empty drums which had contained thorium were buried in a depressiion in the southwestern corner of the original property. A shallow excavation was made in the depression, and about 2,500 55-gallon drums were crushed with a crane and wrecking nall and then covered with a thin layer (about 1 to 2 feet) of soil. Burial occ urred in an irregular trench approximagely 12 to 14 feet deep. The depth to bedrock in this area if the facility appears to be a maximum of about 600 inches (50 ft.). A magnetic survey conducted in 1990 indicated that some of the burials may lie under the present position of the road intersection. Thjis is also supported by the interpretation of historic aerial photographs. In 1996 and 1997, during installation of the remedial action (pump and treat.soil vapor extraction system) for Operable Unit One, approximately 30 of these drums were unearthed. Radiological (thorium) contamination in this area ranged from 0.3 to 561.7 pCi/g. Additional investigation may be required to prepare for the remediation of this area.	350,000	Operable Unit 9 Site Scoping Report, December 1994 Potential Release Site Package. PRS # 8/9/10/11/12, Rev. 0, Feb 1966
17	Oil Burn Structure	PRS 17 is the Building 34, Oil Burn Structure. It was constructed in 1965 and is located west of Building 34, east of the retention basin, and north of the Building 34 Former Aviation Fuel Storage Tank. The Oil Burn Structure is an open square pit , approximately 10 ft. on each side and 8 ft. deep, with 8 ft. high walls, constructed of concrete block with brick-lined walls. The bottom is composed of an unknown thickness of concrete. The oil burn structure was removed from service in 1979. However an unknown liquid was observed in the bottom of the oil burn structure in 1988. The condition of the concrete floor of the structure was observed as being cracked and broken in spots with enough soil in areas to support plant growth. The structure is currently out of service but still in place. The oil burn structure was used to test shipping containers against Department of Transportation requirements by subjecting them to a gas fire for 15 minutes. Organic waste volume estimate: 500 Cubic Feet	0	PRS 17 Response Action, www.doe-md.gov
31	Underground Sanitary Sewer Line G5	PRSs 31-36:Characterizes the nature and extent of potential contamination associated with joints or breaks. This response involves the underground sanitary sewer lines. This scope of work is anticipated to involve inspection, flushir and verification sampling. Minimal waste is expected to be generated. It is assumed that the lines will need to be flushed back to the sanitary plant and then certified. This can only be done when the radiological buildings are taken off-line.	0	Operable Unit 9 Site Scoping Report, December 1994
32	Underground Sanitary Sewer Line G5	See PRS 31 Narrative	0	Operable Unit 9 Site Scoping Report, December 1994
33	Underground Sanitary Sewer Line G5	See PRS 31 Narrative	0	Operable Unit 9 Site Scoping Report, December 1994
34	Underground Sanitary Sewer Line G5	See PRS 31 Narrative	0	Operable Unit 9 Site Scoping Report, December 1994
35	Underground Sanitary Sewer Line G5	See PRS 31 Narrative	0	Operable Unit 9 Site Scoping Report, December 1994
36	Underground Sanitary Sewer Line G5	See PRS 31 Narrative	0	Operable Unit 9 Site Scoping Report, December 1994
41	Thorium Drum Storage and Redrumming Area	In the mid-1950s, the Atomic Energy Commission directed the Mound Plant to develop a process for the extraction of thorium from Brazilian monazite sludge and other thorium-bearing materials. The goal was to construct a refinery that would recover thorium from the sludge and other ores and provide a thorium salt suitable for preparing high purity thorium metal. The thorium ore processing program was very short lived. Mound Plant began to receive sludge materials in early 1955 and the program was canceled in May 1955. However, before the Commission canceled the program, the Mound Plant had received 5,900 55-gallon drums of thorium containing sludge and ore. From 1955 to 1965, the thorium ore and sludges were repackaged almost annually and the drums were stored in large groups throughout the plant grounds. As many as 20,000 empty, but corroded drums were buried. In 1966, the thorium was moved to a bulk-type storage silo (Bldg 21) and removed from the silo in 1974. Interviews with current and former employees and a search of the Mound Plant records identified the tritium ores were stored at PRS 41. In 1988, the Mound Site Survey Project confirmed the presence of thorium in the area surrounding Buildings 19 and 72 on the western border of the Mound Plant. In 1965, thorium contaminated soil was reportedly scraped and the area was graded. In a small area near Building 19, plutonium was detected. This area may have been contaminated by the 1969 Pu-238 waste line break that contaminated the Miami-Erie Canal and the runoff hollow, west of the fenceline.	108,000	Operable Unit 9 Site Scoping Report, December 1994
63	Building 19 Soils	PRS 63 is an approximately two square foot area located on the pavement just south of Building 19. This site became a PRS due to cobalt-60 and cesium-137 contamination. Subsequent measurements using a germanium detector confirmed these elevated readings, but could not confirm which isotopes were present. A continuum of gamma ray energies were observed thus indicating potential subsurface beta particle emissions but not from Cobalt-60 or Cesium-137. Building 19 was used for storage and redrumming of thorium in the late 1950s and early 1960s. On the evening of May 31, 1984, an incident occurred at this location when a drain pipe, unknowingly contaminated with cobalt-60 and cesium-137, was removed from T Building and placed on the pavement outside of Building 19. Contamination from the pipe was spread over approximately two square feet of pavement. The pavement was decontaminated the following day.	1,000	PRS 63 Response Action, www.doe-md.gov PRS Package - PRS 63; Final; Nov. 1997 PRS 63, 405, 409, 410, 411 revised Finla PRS Data Packages, April 1998
64	Building 19 Historic Gasoline Tank	The site is located just east of Building 19. Two gasoline pumps are visible on a historical drawing and in historic photographs dating back to 1947 and 1948. This site was identified during the Mound Plant Underground Storage Tan Program and Regulatory Status Review as a result of a review of historic construction drawings. The number, volume and construction of the tank(s) has not been determined nor has documentation concerning closure of the tank(s) been found. It is believed that the tank(s) were removed, probably as part of original site construction demobilization. Although, it is unknown whether or not contamination exists in this area, the planning assumption is that a limited volume of soil contaminated with VOCs will require removal/treatment. Organic waste volume estimate: 3,000 Cubic Feet	0	Operable Unit 9 Site Scoping Report, December 1994
67	Plant Drainage Ditch	PRS 67 was originally identified by the Preliminary Review/Visual Site Inspection in 1988. It is an open, unlined channel that flows above ground through the central part of the facility from Building 22 to the retention basins on the western plant boundary. The ditch carries surface run-off from both the Main Hill and the SM/PP Hill areas and the asphalt lined pond that drains to the ditch through a culvert, emerging behind Building 22. From that point, the open ditch falls 40 feet over a length of 1800 feet. The banks rise steeply from 8 to 20 feet above the flow line of the ditch, and its width varies from 30 to 80 feet. The uppermost reach was filled and reclaimed for development in the late 1960s. In the 1960s and early 1970s, the plant drainage ditch received systematic releases of low-activity plutonium-238 wastewater from operations. Periodic spills have occurred since the 1950's and are documented in investigation reports. The contaminants involved included fuels, solvents, oils, cooling-water brines (calcium chloride and zinc chromate), ethylene glycol and plutonium-238 wastewater.	40,000	Operable Unit 9 Site Scoping Report, December 1994 PRS Package - PRS #67, April 1996

Exhibit 4, Section III - Remaining Response Actions (RAs)

PRS #	PRS DESCRIPTION	SCOPE OF WORK	Estimated LL Waste Volume (ft3)	Related Documents
68	Asphalt-Lined Pond	The Asphalt Pond (near Building 61) was identified as a PRS during the Preliminary Review/Visual Site Inspection for RCRA Facilities (Mound Plant) in 1988. The Asphalt Lined Pond began operating in the 1970s and is still in use. It is approximately 150 ft by 150 ft with a nominal capacity of 1.5 million gallons. The pond receives storm water from the SM/PP Hill storm sewers, SM/PP hillside runoff, and non-contact cooling water. The pond's bottom/sides are covered with a layer of asphalt. The pond provides temporary storage, flow equalization, and retention time for removing suspended solids prior to discharge to the drainage ditch. Sediment buildup in the pond is minimal and sediments have been removed from the pond only once during its operation, in 1982. Cracks in the liner were observed during the removal of vegetation from the north end of the pond during the summer of 1991. It is assumed the entire pond and liner will require removal. Provisions must be made to maintain stormwater settling capability after this pond is taken off-line. The stormwater holding capability must not impact the redevelopment plans in the area including the proposed spine road.	45,000	Operable Unit 9 Site Scoping Report, December 1994
69	Overflow Pond	PRS 69 is the Mound Plant Overflow Pond and outflow pipe. It is a PRS due to the presence of Pu-238 contamination, site sanitary landfill leachate, effluent from the plant drainage system, and storm water runoff. The overflow pond is located near the southwest corner of the original plant property, north of the current spoils area, and north and adjacent to (originally part of) the historical landfill. Operating continuously since 1979, the pond is approximately 300 feet by 300 feet in size and has a capacity of 5,000,000 gallons. During its construction wastes from the historical landfill, were excavated and placed in the remaining landfill area to the immediate south. A portion of the wastes from the past landfill area remains below the overflow pond, and leaching from the excavated material into the pond may have occurred. (This was addressed by PRS 10, and has been classified by the Core Team as requiring "No Further Action".) A burn cage operated adjacent to the area of the current overflow pond. Specifically, the purpose of the pond is to retain storm water flows, settle sediment, and support compliance with the NPDES discharge standards for suspended solids. The pond is fed by two inlets, one being the plant main drainage ditch, PRS 67, and the other feeding from the southern portion of the original property. Stormwater settling capability must be maintained during and after this response action unless agreements are made with the Ohio EPA.	216,000	Operable Unit 9 Site Scoping Report, December 1994
70	Retention Basins and Weir Basin	PRS 70 is located in the southwestern corner of the original plant site and consists of an open-topped impoundment with earthen sides which is used to control the flow of water from the open drainage ditch. The bottom is partitioned into basins by concrete dividers. Also included in this PRS is the Weir Basin, with dimensions of approximately 40 ft. by 40 ft. It is connected to the retention basins by a spillway. PRS 70 was identified as a potential release site because the basins were potentially contaminated by process water from the Plant Drainage Ditch according to the Operable Unit 9, Site Scoping Report: Volume 7 - Waste Management and the SM/PP Hill Storm Sewers according to the Operable Unit 9, Site Scoping Report: Volume 12 - Site Summary Report. The rainfall runoff and facility effluent from the plant drainage ditch flow into the northernmost basin discharging to the south basin and finally into the west basin. This is anticipated to require a minor response action and may involve the scarifying of the concrete in the area along with some waste removal.	1,000	Operable Unit 9 Site Scoping Report, December 1994 PRS 76 Further Assessment Data Report, Final, Sept. 2001. Mound Plant Area C PRS -76, July 1995
75	Railroad Siding	PRS 75 is a soils area located in the vicinity of the railroad siding near PH Building, in the lower valley area of the plant. The siding has been used for loading and unloading materials and wastes for the polonium, thorium, and plutonium projects in the 1950's, 60's and 70's. In 1955, approximately 1,650 tons of thorium sludge, packaged in over 6,000 55-gallon drums were shipped to Mound, many in deteriorated condition. The drums were unloaded at the siding or at historic Warehouse 9. Many of the railroad cars required decontamination to remove residual sludge materials and were washed at the siding. From the early 1970's to the late 1980's, Mound used the railroad siding to ship packaged plutonium wastes via special railcars to out of state disposal facilities. No record of spill or contamination at the siding is known from these activities. Between 1982 and 1986, approximately 5,000 feet of track leading up to Warehouse 9, were removed as part of the Waste Transfer Line Removal.	45,000	PRS 75 Response Action, www.doe-md.gov
76	Warehouse 9	The FA for PRS 76 was completed in 2002. This location was identified as a potential release site as a result of historical information on operations conducted in the warehouse and conjecture as to how the building was dismantled and disposed. Warehouse 9 was built as part of the original construction of Mound and was used to store cement. It was later used to ship and receive drummed radioactive materials. It was a wooden structure with an elevated wooden floor. In 1955 the warehouse was used for unloading thorium drums to be used in the planned thorium refinery. Photographs indicate it was gone by 1962. It was probably sold for salvage and as many of the old warehouses, the flooring was too contaminated to remove from the site and may have been burned in place. This PRS will result in a removal action to deal with VOC contamination in the local soils. There is a potential that some (very limited) radioactive contamination may be identified in the area. Organic waste volume estimate: 27,000 Cubic Feet	0	Operable Unit 9 Site Scoping Report, December 1994
87	Building 49 Solvent Storage Shed	The Further Assessment for PRS 87; Building 49 Solvent Storage Shed was completed during 2002. Potential Release Site (PRS) 87 refers to the storage sheds that supplied solvents to the cleaning operations performed in Building 49. The Building 49 operations have used two storage sheds. The first shed was built in 1968 and was operated until 1986. This shed, located on the north side of Building 49, was demolished in 1986 to provide space for the construction of the Building 49 addition. Another shed was built and is located approximately 100 feet east of the Building 49 addition. This shed is a small metal structure with dimensions of 8x12x10 feet. It was operational from 1986 to the early 1990s. Trichloroethene (TCE), isopropyl alcohol, ethyl alcohol, Freon and hexane were stored in these sheds. There is no record of a solvent spill or leak from the storage sheds. The Building 49 Solvent Sheds did n involve radiological operations. This removal action will involve the removal and or treatment of soils contaminated with VOCs in and around building 49. Organic waste volume estimate: 5,000 Cubic Feet	0	Operable Unit 9 Site Scoping Report, December 1994
123	Radioactive Waste Line Break	PRS 123 is the result of a December 1970 waste-line break that released Polonium-210 waste liquids to the surrounding soils. A total of 39 30-gallon drums of soil, with an estimated polonium content of 20 Ci, were boxed and shipped off site. No cleanup levels were documented. This area is located west of PRS 434 at the northeast corner of Building 48, and contains the Underground Line segment PRS 429. Current contaminants of concern for PRS 123 are cobalt-60, cesium-137, thorium-232, and plutonium-238.	108,000	Operable Unit 9 Site Scoping Report, December 1994
124	Building 48 Hillside	PRS 124 is identified as the Mound Plant Building 48 Hillside. GIS mapping/sampling information indicates that the area of concern is located adjacent to a radiological processing line manhole northwest of Building 48. Potential Release Site (PRS) 124 was caused by a release of 1,500 to 2,000 gallons of low-level radioactive wastewater Nov. 9, 1967. Several Main Hill radiological process waste lines join near this location and continue to the Waste Disposal (WD) Building. Soil Sampling accomplished in support of a construction project (Circa 1986) indicated plutonium-238 concentrations as high as 32,000 pCi/g.	65,000	Operable Unit 9 Site Scoping Report, December 1994
153	Radioactive Waste Line Break	PRS 153 is a soil area on the hillside west of the Hydrolysis House (HH) Building and bounded on the south by the roadway. This soil area was contaminated by leaks of wastewater from the 3-inch underground pipeline that transversed the northern boundary of this soil area. Acidic aluminum chloride wastes from polonium production were processed in HH Building. The waste was treated to form a gelatinous sludge and a supernatant liquid. The supernatant liquid was transferred via the underground line to WD Building for additional waste treatment. HH to WD pipeline leaks of low level alpha wastewater were discovered and repaired in 1954 and 1958. This line was abandoned in place in 1959. The HH to WD underground line was removed in 1994 along with soil in the immediate area of the waste line. Near the completion of the line removal, an expanded area of contamination was discovered on the north side of the pipeline. The removal of contaminated soil from this small area was limited. The excavation was marked and backfilled with clean soil.	135,000	PRS 153 Response Action, www.doe-md.gov PRS Package, Final Feb. 1997

Exhibit 4, Section III - Remaining Response Actions (RAs)

PRS #	PRS DESCRIPTION	SCOPE OF WORK	Estimated LL Waste Volume (ft3)	Related Documents
154	Thorium Contaminated Soil	PRS 154 is identified as the hillside northeast of Building 23 and east of WD Building. PRS 238 was identified as a radiological hot spot in the mid-1980s by the Site Survey Project. Thorium-230 contamination may have resulted from either the thorium-230, known as ionium , or protactinium-231 separation programs. Both programs were active in the mid-1950s, and may have used the area for storage of wastes. Locations of the leaking waste containers from the protactinium-231 program are not accurately documented. An underground radioactive waste line passed through the upper boundaries of PRS 154. This waste line originally carried liquid radioactive waste from the Hydrolysis House (HH) Building to the Waste Disposal (WD) Building. This line was removed in May 1994 and is covered by PRS 153.	350,000	Operable Unit 9 Site Scoping Report, December 1994 PRS 154/238 SAP Final, June 2002
237	Site Survey Project Potential Hot Spot	PRS 237 became a PRS due to the elevated detection of cesium-137 and cobalt-60 found during the Site Survey Project. Cesium-137 was found at 10 pCi/g and Cobalt-60 at 82 pCi/g as compared to the Guideline Value of 0.46 pCi/g and 0.1pCi/g respectively. Subsequent sampling in 1995 detected no radioactive contamination in the surrounding area. PRS 237 is located approximately 100 feet northwest of I Building at the edge of the road. I Building was the location of explosive research, testing and manufacturing in the late 1950s and early 1960s. No additional contamination generating processes or activities are known to have occurred in this area. The Core Team originally recommended Further Assessment for PRS 237. Subsequently, the cost of further investigation versus the cost of removing the potentially contaminated soils was evaluated. Cost estimates indicate that the cost of removal is not significantly greater than the cost of further assessment at PRS 237.	1,000	PRS 237 Response Action, www.doe-md.gov PRS 237 BDP Final, March 1997
238	Site Survey Project Potential Hot Spot	PRS 238 is identified as a Thorium radiological hot spot located between buildings 125 and HH. PRS 238 was identified in the mid-1980s by the Site Survey Project. This PRS is in close proximity to PRS 153 and 154 and may be combined with them.	1,000	Operable Unit 9 Site Scoping Report, December 1994 - See 154
240	Site Survey Project Potential Hot Spot	In this small area located south of building 23, Thorium 232 was identified at approximately 2.5 times the clean-up standard. This will result in a minor removal action (or additional sampling).	1,000	Operable Unit 9 Site Scoping Report, December 1994
267	Thorium Contaminated Soil in Building 31 area	PRS 267 was identified as a potential release site as a result of historical information and the Radiological Site Survey performed in October 1983. The historical data suggests the radiological contamination associated with PRS 267 (approximately 40,000 square feet) was from a thorium 232 redrumming operation. In 1965, the surface soil was excavated from the area and backfilled with clean soil. The excavated soil was heavily contaminated with Th-232. Building 31 (6100 sq. ft.) was built in 1966 for the storage of radioactive contaminated waste (drums and boxes). For PRS 267, no record of hazardous chemical processes are known to have occurred in the immediate area. Radiological data from the Site Survey in 1983 identified Thorium 232 contamination at a maximum value of 6.2 pCi/g in a subsurface sample at a depth of 18 inches and 12 pCi/g at one surface location. The Pu-238 levels were below the D&D ALARA guideline of 25 pCi/g. All soil gas readings within PRS 267 for target compounds were "non-detects". One point outside of PRS 267 indicated an elevated level of "total halogenated hydrocarbons" and this point is designated as PRS 392. Additional sampling within PRS 267 has occurred as part of the "Other Soils Project" and Mound soil screening results indicate levels in excess of 4.8 pCi/g for Th-232 and 37 pCi/g of Pu-238	14,000	Operable Unit 9 Site Scoping Report, December 1994 PRS 267 SAP Final, April 2002
269	Building 36 Historic Gasoline Tanks	PRS 269 is an area of land where two underground fuel storage tanks were shown to be located to support the original plant construction. A 1948 drawing shows four pumps supplied by two tanks located west of building 50. It is believed that these tanks were removed but no documentation exists. Samples collected in the area did detect significant levels of organics and a limited response action may be required. Organic waste volume estimate: 3,000 Cubic Feet	0	Operable Unit 9 Site Scoping Report, December 1994 PRS Package # 269, Rev. A, Sept. 1996
273	Thorium-Contaminated Soil	PRS 273 is an area of soil located west of Building 38 and the Special Metallurgical Building on the SM/PP (Special Metallurgical Building/Plutonium Processing Building) hillside. PRS 273 was created from historical evidence citing the dumping of radioactively contaminated soil. This area covers approximately 19,000 square feet. In 1965, thorium-232 contaminated soil was placed in PRS 273. Also in 1965, plutonium-238 and thorium-232 contaminated soil from the SM Building was placed in PRS 273. The Waste Transfer System pipeline (now removed) which carried radioactive waste from Building 38 to the Waste Disposal Building (WD) passed through the west side of PRS 273.	190,000	PRS 273 Response Action, www.doe-md.gov PRS Package #273, Final, March 1997
282	Spoils Disposal Area/Construction Spoil	PRS 282, also known as the Spoils Disposal Area, consists of approx. 10 acres of soils located in the northwest corner of Mound's South Property (also known as the "New Property"). Just north of PRS 282 is Mound's historic landfill. Prior to Mound's acquisition, PRS 282 was farm land. PRS 282 acquired the name Spoils Disposal Area because it is used as a repository for soils removed during Mound construction activities. All soils placed in PRS 282 (Spoils Disposal Area) were screened for plutonium-238 and thorium-232 prior to disposal. The current criterion for placement of soils in the area is 25 pCi/g for plutonium and 2 pCi/g for thorium (which is lower than the historical levels of 100 and 5 pCi/g, respectively). The contaminants of concern at PRS 282 are Pu-238, Th-232, and gasoline contaminated soils (per the OU9 Volume 12 Site Scoping Report). However, because of PRS 282's usage as a soils repository, the potential for all radionuclides and hazardous compounds prevalent at the Mound site will need to be considered.	81,000	Operable Unit 9 Site Scoping Report, December 1994 PRS 282 SAP, Final April 2002 PRS Package # 282, Rev. A, May 1996
303	Warehouse 14 (AKA Pad 14)	PRS 303 was identified as a potential release site as a result of historical information on the operations conducted in Warehouse 14 (AKA Pad 14) and conjecture as to how the building was dismantled and disposed. The historical dat suggests that Warehouse 14 was built sometime prior to 1958, and was utilized for the storage of equipment destined for disposal, drums of recoverable plutonium-238 and drums of contaminated trash. The building was present in 1965, but plant photographs indicate the building no longer existed in 1968 and no records of decommissioning exist. A concrete pad (floor) is still present.	5,000	PRS Package, PRS 303, June 2002 PRS Package # 303, Public Review Draft, June 2002
363	Soil Gas & Plutonium Hot Spot	PRS 363 was an isolated Pu-238 hot spot identified during the site survey for the OU5, Non-AOC investigation (June 1994-October 1994). No radioactive or hazardous waste generating processes are known to have occurred at the location of PRS 363. However, there is a 12-inch concrete storm sewer pipe near PRS 363, which transported a low-risk wastewater from SM Building to the site drainage ditch. The Core Team originally recommended Further Assessment for PRS 363. Subsequently, the cost of further investigation versus the cost of removing the potentially contaminated soils was evaluated. Cost estimates indicate that the cost of removal is not significantly greater than the cost of further assessment at PRS 363. Additionally, Further Assessment findings may indicate the need for a Response (removal) Action, resulting in costs associated with both Further Assessment and Response Action. Therefore, th Core Team recommends a Response Action as a more cost-effective course of action for PRS 363.	1,000	PRS 363 Response Action, www.doe-md.gov PRS Package #363, Final, April 1998
397	Elevated Soils Gas Location, Parking Lot of Fuel Area	PRS 397 is located in the parking lot of the refueling facility, south of Building 51 and north of Building 22. PRS 397 was identified in the Operable Unit 5, Operational Area Phase 1 Investigation Non-AOC Field Report. The investigation of the non-areas of concern (non-AOC) generally included areas that were not known or suspected to be contaminated. As part of scoping for the study, areas of special interest with the possibility of the presence of hazardous substances were identified. One such area, the "Fuel Area" was included in the study and now encompasses PRS 397 has the potential for limited organic contamination and is not planned to be included with the large PRS 66 remediation. Organic waste volume estimate: 2,000 Cubic Feet	2,000	PRS Package PRS 397 and 398, Revision A, July 1996
405	Building 23, Oil Contaminated Soil	PRS 405 is a soil area located approximately five feet north of Building 23 at the east end of the building. During construction activities in the area in 1994, an oily substance was detected, samples indicated that the substance contained plutonium-238 and thorium-232. No PCBs were detected and it is unclear if organics are present in the vicinity. A relatively small response action is planned for the area since the cost for sampling was determined to be equivalent to the response action.	1,000	PRS 405 Response Action.www.doe.md.gov. PRS Package #405, Final, November 1997

Exhibit 4, Section III - Remaining Response Actions (RAs)

PRS #	PRS DESCRIPTION	SCOPE OF WORK	Estimated LL Waste Volume (ft3)	Related Documents
409	Stoddard Solvent	PRS 409 is a chemical solvent (Stoddard Solvent) that contaminated soils located near Operable Unit 1, just west of the site sanitary landfill. Stoddard Solvent is a petroleum-based solvent. This area was identified September 23, 1996 by the contractor installing the canal re-route drainage pipe. The soil contamination extended around and below a buried concrete pad that had been used as a drum-staging pad in the middle 1960's. The contaminated soil in the path of the pipeline diversion project and immediately to the west was removed and staged for treatment in the Mound Plant bio-remediation facility for petroleum contaminated soils. However, no attempt was made to remediate the entire extent of contamination under the concrete pad. Field observations indicate that contamination extends under the remaining portion of the concrete pad and half way across the access road. PRS 410 is a gravel/soil area located under the road that runs east to west between the OU1 landfill and the Spoils Area. Contamination was discovered when an aroma of diesel fuel was encountered during the removal and replacement of an underground drainage pipe from beneath the road. During the excavation, all visible signs of contamination were removed from the immediate area around the culvert. However, no effort was made to investigate contamination potential beyond the boundary of the drainage control project, and no verification sampling was performed in the area of visible staining that was removed. Based on odor and soil appearance, the contamination extends beyond the original excavation. The Core Team originally recommended Further Assessment for PRS 409/410. Subsequently, the cost of further investigation versus the cost of removing the potentially contaminated soils was evaluated. Cost estimates indicate that the cost of removal is not significantly greater that the cost of further assessment at PRS 409/410. Additionally, Further Assessment findings may indicate the need for a Response (removal) Action, resulting in costs associated with both Further Assessment and Response Action. Therefore, the Core Team recommended a RESPONSE ACTION as a more cost-effective course of action. Organic waste volume estimate: 27,000 Cubic Feet	0	PRS 409 Response Action, www.doe-md.gov PRS Package #409, Final, November 1997
410	Stoddard Solvent	See PRS 409 Narrative	0	PRS 410 Response Action, www.doe-md.gov PRS Package Final, November 1997
411	Soil Contamination - Asphalt Roadway	This hot spot is located adjacent to the slab on the main hill where the paint shop had been located. Plutonium contamination is primarily associated with this area and a limited removal in the area is anticipated.	2,000	PRS 411 Response Action, www.doe-md.gov PRS Package #411, Action Memo Final, June 1999
413	SD Creosote Contaminated Soil	PRS 413 is a chemically contaminated soil location situated in the vicinity of the old Sanitary Disposal (SD) facility. The SD facility, now removed, was located on the southwest side of the Mound Plant Main Hill, approximately northwest of, and on terrain elevated above, the Plant Waste Disposal (WD) Building. Soil sampling of the subject area resulted in the discovery of chemical constituents in exceedence of guideline criteria. The area was then excavated. The Core Team originally recommended Further Assessment (FA) for PRS 413. In realization that PRS 413 also lies in close proximity to WD Building and numerous WD Building PRSs, the Core Team believes it is both prudent to address PRS 413 with the removal action at WD Building and the associated PRSs. Organic waste volume estimate: 3,000 Cubic Feet	0	PRS Package, PRS 413
415	Soil Contamination – Radiological	PRS 415 was established during the binning process for DS Building. A GIS review of the area around DS Building identified soil sampling location ID SCR307 with values of plutonium-238 and thorium-232 above guideline criteria PRS 415 is an isolated hot spot located to the south of DS and T Buildings, and to the north of WD and HH Buildings, as well as to the north of PRS 153.	1,000	PRS Package, PRS 415, June 2002
417	Soil Contamination-High Soil Gas Near W	PRS 417 is identified as a localized region of Volatile Organic Compound (VOC) contaminated soils located just west of Building 19. This PRS was identified as a result of a Limited Field Investigation study conducted in the summe of 1971. In 1997, a very large scale reconnaissance survey utilizing a geoprobe identified very localized elevated concentrations of Trichloroethylene, (TCE) in the soil gas just southwest of Building 19. Field results indicated TCE concentrations in excess of 300 parts per billion (ppb) volume/volume (v/v), and laboratory analysis indicated TCE concentrations in excess of 880 ug/kg in these soils. Mound Plant soil screening guidance equations indicate that the TCE contaminated soils associated with PRS 417 may serve as a source of leachate to the Buried Valley Aquifer (BVA) at dissolved concentrations in excess of 5 ppb (MCL). Ohio EPA studies suggest that given the laboratory verified bulk soil TCE concentration of 880 ug/kg, it is theoretically possible to achieve TCE concentrations of about 80 ppb at the edge of the BVA. Organic waste volume estimate: 40,500 Cubic Feet	0	PRS Package, PRS 417
423	Hot Waste Line-Segment	PRSs 423 through 428 identify underground line segments (UGLy) that served to carry radioactively contaminated hot wastes (HW) from H Building (environmental laboratories, laundry, change rooms) operations en route to the Waste Disposal (WD) Building. Hot wastes from operations in H Building were directed to drains and a sump in room H-133, which discharged these wastes into the subject PRSs. H Building sumps are addressed, in part, by other Potential Release Sites (PRS 210 and PRS 337) and are part of this scope. PRSs 423 through 428 carried hot wastes from the drains at the west side of H Building, west and south to WD Building. Plutonium, americium, thorium and radium are primary contaminates of concern with these PRSs. It is assumed that this removal will require the excavation of the lines (approximately 4,000 linear feet) and the associated soils which have been contaminated. The total waste volume for all 18 line segments are included with this PRS.	112,360	PRS Package, PRS 423, 424, 425, 426, 427 and 428
424	Hot Waste Line-Segment	See PRS 423 description.	See PRS 423	PRS Package, PRS 423, 424, 425, 426, 427 and 428
425	Hot Waste Line-Segment	See PRS 423 description.	See PRS 423	PRS Package, PRS 423, 424, 425, 426, 427 and 428
426	Hot Waste Line-Segment	See PRS 423 description.	See PRS 423	PRS Package, PRS 423, 424, 425, 426, 427 and 428
427	Hot Waste Line-Segment	See PRS 423 description.	See PRS 423	PRS Package, PRS 423, 424, 425, 426, 427 and 428
428	Hot Waste Line-Segment	See PRS 423 description.	See PRS 423	PRS Package, PRS 423, 424, 425, 426, 427 and 428

Exhibit 4, Section III - Remaining Response Actions (RAs)

PRS #	PRS DESCRIPTION	SCOPE OF WORK	Estimated LL Waste Volume (ft3)	Related Documents
429	Hot Waste Line-Segment	PRSs 429 through 433 identify UGLy that served to carry radioactively contaminated wastes from T Building operations en route through other UGLy segments (PRSs) to the Waste Disposal (WD) Building. These wastes, from operations in the first floor of T Building, were directed to sumps that discharged the wastes through building lines to the subject PRSs. The T Building sumps and building drain lines are addressed by other Potential Release Sites (PRSs 215-233, 339-341). PRSs 429 and 431 carried wastes fed to the northern boundary wall of T building. PRS 433 is a vertical pipe that carried the waste up to the first floor of T building to the PRS 431 segment. Additionally, waste from PRSs 432 and 430 joined PRS 431 and proceeded westward to the waste disposal building. The primary contaminants of concern associated with these PRSs are cobalt and plutonium. See PRS 423 description for waste volume assumptions.	See PRS 423	PRS Package, PRS 429, 430, 431, 432 and 433
430	Hot Waste Line-Segment	See PRS 429 description.	See PRS 423	PRS Package, PRS 429, 430, 431, 432 and 433
431	Hot Waste Line-Segment	See PRS 429 description.	See PRS 423	PRS Package, PRS 429, 430, 431, 432 and 433
432	Hot Waste Line-Segment	See PRS 429 description.	See PRS 423	PRS Package, PRS 429, 430, 431, 432 and 433
433	Hot Waste Line-Segment	See PRS 429 description.	See PRS 423	PRS Package, PRS 429, 430, 431, 432 and 433
434	Hot Waste Line-Segment	PRSs 434 through 436 identify Underground Line Segments that served to carry radioactively contaminated wastes from T building enroute through other UGLy segments (PRSs) to the Waste Disposal (WD) building. These wastes, from operations in the first floor of T Building, were directed to sumps that discharged the wastes through building lines to the subject PRSs. The T Building sumps and building drain lines are addressed by other Potential Release Sites (PRSs 215-233, 339-341) PRSs 434, 435 and 436 carried wastes fed to the southern boundary wall of T building. PRS 436 consists of 7 vertical pipes that carried waste up from the first floor of T building to the PRS 435 segment of the underground lines. PRS 435 carried the waste westward to PRS 434. PRS 434 also carried the waste westward where it emptied into segment 429. Cobalt, plutonium and thorium are the primary contaminates of concern associated with these PRSs. See PRS 423 description for waste volume assumptions.	See PRS 423	PRS Package, PRS 434, 435, and 436
435	Hot Waste Line-Segment	See PRS 434 description.	See PRS 423	PRS Package, PRS 434, 435, and 436
436	Hot Waste Line-Segment	See PRS 434 description.	See PRS 423	PRS Package, PRS 434, 435, and 436
437	Hot Waste Line-Segment	PRS 437, 438 and 439 identify underground line segments that served to carry radioactively contaminated wastes from R building and SW building to WD building. These lines all transit through manhole 20. The primary contaminants of concern are plutonium and tritium. See PRS 423 description for waste volume assumptions.	See PRS 423	PRS Package, PRS 437, 438 and 439
438	Hot Waste Line-Segment	See PRS 437 description.	See PRS 423	PRS Package, PRS 437, 438 and 439
439	Hot Waste Line-	See PRS 437 description.	See PRS 423	PRS Package, PRS 437, 438 and 439
440	Hot Waste Line-Segment	PRS 440 identified the underground line segment that served to carry radioactively contaminated hot wastes from SW Building (Operations Labs/Tritium Development/Surveillance) operations enroute to the Waste Disposal (WD) Building. Hot wastes from operations in SW Building were discharged through tanks and sumps to the subject PRS. SW Building tanks and sumps are addressed, in part, by other Potential Release Site Data Packages (PRSs 135, 136, 137, 138, and 139). PRS 440 carried hot wastes from SW Building, south to WD Building. Plutonium is the primary contaminate of concern associated with this PRS. See PRS 423 description for waste volume assumptions.	See PRS 423	PRS Package, PRS 440
999	Building Soils	This PRS has not been officially assigned a number but includes the area around BLDG 38, WD Building, SW Building, R Building and HH Building and the contaminated soil left after the demolition of the SM Building. This will b a significant removal action associated with Radiologically contaminated soils. All of these soils will be contaminated with plutonium and possibly thorium. The soils around building SW and R may also contain tritium. The need for this removal action is to account for contaminated soil which extends beyond the footprint of the listed facilities. The full extent of the contamination will need to be determined.	700,000	